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(57) 【要約】

要約書なし。

\* NOTICES \*

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1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.\*\*\* shows the word which can not be translated.

3.In the drawings, any words are not translated.

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**CLAIMS**

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[Claim(s)]

[Claim 1]

It is a delivery catheter,

A catheter shaft which has a control lumen for an operating element,

When it is a vaginate part which demarcates acceptance space for a plug prevention filter, and operating said operating element in order to make it easy that said vaginate part arranges a filter out of said acceptance space, it is this movable vaginate part to said catheter shaft,

A delivery catheter having an engagement element for engaging with a filter in said acceptance space when said vaginate part moves to said catheter shaft.

[Claim 2]

The catheter according to claim 1 characterized by separating a distal end of said catheter shaft from a proximal edge of said vaginate part for movement to said catheter shaft of said vaginate part.

[Claim 3]

The catheter according to claim 2, wherein said distal end of said catheter shaft is arranged at a position which set an interval to the juxtaposition side of said proximal edge of said vaginate part.

[Claim 4]

The catheter according to claim 3, wherein said catheter has a cover sleeve which extends between said distal end of said catheter shaft, and said proximal edge of said vaginate part.

[Claim 5]

The catheter according to claim 4, wherein said cover sleeve is attached to said catheter shaft.

[Claim 6]

The catheter according to claim 5 with which said vaginate part is characterized by a movable thing to said cover sleeve.

[Claim 7]

It is a catheter to a description in Claim 4, wherein said cover sleeve is attached to said vaginate part.

[Claim 8]

The catheter according to claim 7 with which said cover sleeve is characterized by a movable thing to said catheter shaft.

[Claim 9]

The catheter according to any one of claims 1 to 8, wherein said engagement element is attached to said catheter shaft.

[Claim 10]

The catheter according to any one of claims 1 to 9, wherein said engagement element extends in the distance side of said catheter shaft.

[Claim 11]

The catheter according to any one of claims 1 to 10, wherein said engagement element contains a

pusher.

[Claim 12]

The catheter according to claim 11, wherein said pusher contains a coil spring.

[Claim 13]

The catheter according to claim 11 or 12, wherein said pusher consists of a polymeric material which has a high elastic modulus.

[Claim 14]

The catheter according to any one of claims 1 to 13 with which said engagement element is characterized by demarcating a guidewire lumen which penetrates it.

[Claim 15]

The catheter according to claim 14 with which said engagement element is characterized by having a guidewire opening in a distal end of said guidewire lumen.

[Claim 16]

The catheter according to claim 15, wherein said engagement element is constituted in order to let a guidewire pass in parallel substantially with a longitudinal shaft of said catheter shaft through said guidewire opening from said guidewire lumen.

[Claim 17]

The catheter according to claim 16 with which a longitudinal shaft of said engagement element is characterized by longitudinal shaft of said catheter shaft, and a substantially parallel thing in a field of said guidewire opening at least.

[Claim 18]

The catheter according to any one of claims 15 to 17, wherein said guidewire opening has turned to the juxtaposition side.

[Claim 19]

The catheter according to any one of claims 15 to 18, wherein said guidewire opening is in a position which only a fixed distance separated from a proximal edge of said catheter to the distance side for quick exchange on a guidewire of said catheter.

[Claim 20]

The catheter according to any one of claims 1 to 19 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a part of length direction of said operating element at least.

[Claim 21]

The catheter according to claim 20 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a field of said guidewire opening.

[Claim 22]

The catheter according to claim 21 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a position with a distance of at least 10 mm in a gestalt at the time of sending at the juxtaposition side from said guidewire opening.

[Claim 23]

The catheter according to claim 22 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a position with a distance of at least 20 mm in a gestalt at the time of sending at the juxtaposition side from said guidewire opening.

[Claim 24]

The catheter according to claim 23 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a position with a distance of at least 30 mm in a gestalt at the time of sending at the juxtaposition side from said guidewire opening.

[Claim 25]

The catheter according to claim 24 with which a cross-section area of said operating element is characterized by being smaller than a cross-section area of said catheter shaft in a position with a distance of at least 40 mm in a gestalt at the time of sending at the juxtaposition side from said guidewire opening.

[Claim 26]

The catheter according to any one of claims 1 to 25, wherein a diameter of said operating element is in the range of 0.20 thru/or 0.38 mm (0.008 thru/or 0.015 inch).

[Claim 27]

The catheter according to claim 26, wherein a diameter of said operating element is in the range of 0.25 thru/or 0.31 mm (0.01 thru/or 0.012 inch).

[Claim 28]

The catheter according to any one of claims 1 to 27, wherein said operating element contains a wire for control.

[Claim 29]

The catheter according to claim 28, wherein said operating element contains a hauling wire.

[Claim 30]

The catheter according to any one of claims 1 to 29, wherein said operating element comes from said control lumen outside in a fixed position by the side of distance of said guidewire opening.

[Claim 31]

The catheter according to any one of claims 1 to 29, wherein said operating element comes from said control lumen outside in a fixed position by the side of a juxtaposition of said guidewire opening.

[Claim 32]

The catheter according to any one of claims 1 to 29, wherein said operating element comes from said control lumen outside in a position which adjoined said guidewire opening.

[Claim 33]

The catheter according to any one of claims 1 to 32, wherein said catheter contains a means which carries out guidance which lets a guidewire pass from said guidewire opening.

[Claim 34]

The catheter according to claim 33, wherein a means which carries out said guidance contains a guide tube.

[Claim 35]

The catheter according to claim 34, wherein said guide tube is arranged at said guidewire opening.

[Claim 36]

The catheter according to claim 34 or 35, wherein said guide tube is attached to said engagement element.

[Claim 37]

The catheter according to any one of claims 1 to 36, wherein said guidewire lumen of said engagement element is offset by diameter direction from said lumen for control of said catheter shaft.

[Claim 38]

The catheter according to any one of claims 1 to 37, wherein said catheter shaft contains a mounting piece for attaching said engagement element to said catheter shaft

[Claim 39]

The catheter according to claim 38, wherein said distal end of said catheter shaft is arranged at the distance side of a proximal edge of said engagement element.

[Claim 40]

The catheter according to claim 39 with which said mounting piece is characterized by having pliability higher than said catheter shaft and said engagement element.

[Claim 41]

Claim 38, wherein said mounting piece has larger hardness than said catheter shaft and said engagement element, or a catheter given in 39.

[Claim 42]

The catheter according to any one of claims 38 to 41 being the shape whose diameter was reduced, so that said mounting piece went to the juxtaposition side.

[Claim 43]

The catheter according to any one of claims 38 to 42 being the shape whose diameter was reduced, so that said mounting piece went to the distance side.

[Claim 44]

The catheter according to any one of claims 38 to 43, wherein said guidewire opening is provided by an opening in said mounting piece.

[Claim 45]

The catheter according to any one of claims 1 to 44 including an engagement face for said engagement element to engage with a filter in said acceptance space.

[Claim 46]

The catheter according to claim 45 with which said engagement face is characterized by a thing of a distal end side of said engagement element therefore provided.

[Claim 47]

The catheter according to claim 45 or 46, wherein said engagement face extends in a hoop direction around said engagement element and makes the shape of O type.

[Claim 48]

The catheter according to claim 45 or 46 said engagement face's extending in a hoop direction selectively around said engagement element, and making the shape of U type.

[Claim 49]

The catheter according to any one of claims 45 to 48, wherein said engagement face is constituted so that it may engage with a tubular member of a filter.

[Claim 50]

The catheter according to claim 49 with which said tubular member is characterized by demarcating a guidewire lumen which penetrates it.

[Claim 51]

The catheter according to any one of claims 1 to 50, wherein said operating element is attached to said vaginate part.

[Claim 52]

The catheter according to claim 51, wherein said operating element is attached to lateral surface of said vaginate part.

[Claim 53]

The catheter according to any one of claims 1 to 52, wherein said vaginate part demarcates a proximal side portion and a distance side portion implication and said distance side portion demarcates said acceptance space.

[Claim 54]

The catheter according to claim 53, wherein said operating element is attached to said proximal side portion.

[Claim 55]

The catheter according to claim 53 or 54, wherein said proximal side portion and said distance side portion are fixed with both marker bands.

[Claim 56]

The catheter according to any one of claims 1 to 55, wherein said operating element is a wire for control.

[Claim 57]

The catheter according to claim 56, wherein said operating element is a hauling wire.

[Claim 58]

The catheter according to claim 56 or 57, wherein said operating element contains two or more wires.

[Claim 59]

The catheter according to claim 58, wherein said two or more wires are bundled in accordance with [ both ] at least a part of length direction of said operating element.

[Claim 60]

The catheter according to any one of claims 1 to 59, wherein hardness of said catheter shaft is small toward a distal direction.

[Claim 61]

The catheter according to claim 60 with which hardness of said catheter shaft is characterized by becoming small toward a fixed point by the side of distance of said guidewire opening from a fixed point by the side of a juxtaposition of said guidewire opening.

[Claim 62]

The catheter according to claim 60 or 61, wherein said hardness becomes small gradually toward a fixed direction.

[Claim 63]

The catheter according to any one of claims 60 to 62 with which said catheter shaft is characterized by having at least one slot on said catheter shaft.

[Claim 64]

The catheter according to claim 63, wherein said slot extends in the shape of a screw type along with said catheter shaft.

[Claim 65]

The catheter according to claim 64 with which a pitch of the shape of said screw type is characterized by changing along with said catheter shaft.

[Claim 66]

The catheter according to any one of claims 1 to 65, wherein the thinning of said vaginate part is carried out.

[Claim 67]

The catheter according to claim 66, wherein said vaginate part has the thickness of the range of 0.013 thru/or 0.019 mm (0.0005 thru/or 0.00075 inch).

[Claim 68]

The catheter according to any one of claims 1 to 67, wherein said vaginate part consists of polyethylene terephthalate or material of polytetrafluoroethylene.

[Claim 69]

It is a catheter,

The juxtaposition side shaft part,

The distance side shaft part attached to said juxtaposition side shaft part,

A catheter having a means which hardens said catheter in a bond part between said juxtaposition side shaft part and said distance side shaft part.

[Claim 70]

The catheter according to claim 69, wherein said catheter contains a mounting piece for attaching said distance side shaft part to said juxtaposition side shaft part.

[Claim 71]

Claim 69, wherein a distal end of said juxtaposition side shaft part is arranged at the distance side of a proximal edge of said distance side shaft part and hardens said joined part, or a catheter given in 70.

[Claim 72]

The catheter according to claim 71 with which said mounting piece is characterized by having

pliability higher than said juxtaposition side shaft part and said distance side shaft part.

[Claim 73]

The catheter according to claim 70 or 71, wherein said mounting piece has larger hardness than said juxtaposition side shaft part and said distance side shaft part and hardens said joined part.

[Claim 74]

The catheter according to any one of claims 69 to 73, wherein said catheter contains a means which misses tension.

[Claim 75]

The catheter according to claim 72 being the shape whose diameter was reduced, so that said mounting piece went to the distance side.

[Claim 76]

The catheter according to claim 72 or 73 being the shape whose diameter was reduced, so that said mounting piece went to the juxtaposition side.

[Claim 77]

The catheter according to any one of claims 69 to 75, wherein a guidewire opening is provided in said catheter and said guidewire opening is in a position which only a fixed distance separated from a proximal edge of said catheter to the distance side for quick exchange of said catheter on a guidewire.

[Claim 78]

The catheter according to claim 77, wherein said guidewire opening is provided by an opening of said mounting piece.

[Claim 79]

The catheter according to claim 77 or 78, wherein said guidewire opening is substantially [ longitudinal shaft / of said catheter ] suitable in the parallel direction.

[Claim 80]

The catheter according to any one of claims 77 to 79 containing a means which carries out guidance which said catheter lets pass to said guidewire opening [ in / for a guidewire / said catheter ].

[Claim 81]

The catheter according to claim 80, wherein a means which carries out said guidance is provided with said mounting piece.

[Claim 82]

It is a delivery catheter,

A catheter shaft,

A vaginate part which demarcates acceptance space for a plug prevention filter,

It has the operating element combined with said vaginate part,

A delivery catheter when operating said operating element in order to make it easy that said vaginate part arranges a filter out of said acceptance space, wherein it is movable and said operating element is combined with an outer surface of said vaginate part to said catheter shaft.

[Claim 83]

The catheter according to claim 82, wherein it extends inside through a control lumen in said catheter shaft, and said operating element comes from said control lumen outside and extends outside along with said vaginate part.

[Claim 84]

The catheter according to claim 82 or 83, wherein said operating element has adhered to said vaginate part.

[Claim 85]

The catheter according to any one of claims 82 to 84, wherein said operating element is a wire for control.

[Claim 86]

The catheter according to claim 85, wherein said operating element is a hauling wire.

[Claim 87]

The catheter according to any one of claims 82 to 86, wherein said vaginate part is combined with a proximal side portion and a distance side portion implication and said operating element is combined with said proximal side portion.

[Claim 88]

The catheter according to any one of claims 82 to 87, wherein said guidewire opening is provided in said catheter in a position which only a fixed distance separated from a proximal edge of said catheter to the distance side for quick exchange on a guidewire of said catheter.

[Claim 89]

The catheter according to any one of claims 82 to 88, wherein said catheter contains an engagement element which engages with a filter in said acceptance space when moving said vaginate part to said catheter shaft.

[Claim 90]

It is a delivery catheter,

A catheter shaft,

It is this movable vaginate part to said catheter shaft in order to be a vaginate part which demarcates acceptance space for a plug prevention filter and to make it easy that said vaginate part arranges a filter out of said acceptance space,

When said vaginate part moves to said catheter shaft, it has an engagement element for engaging with a filter in said acceptance space,

A delivery catheter having offset said engagement element from said catheter shaft to a diameter direction.

[Claim 91]

The catheter according to claim 90, wherein said engagement element is attached to said catheter shaft.

[Claim 92]

The catheter according to claim 90 or 91, wherein said engagement element has extended in the distance side of said catheter shaft.

[Claim 93]

The catheter according to any one of claims 90 to 92 with which said distal end of said catheter shaft is characterized by being located in the distance side of said proximal edge of said engagement element.

[Claim 94]

The catheter according to any one of claims 90 to 93, wherein said catheter contains a mounting piece for attaching said engagement element to said catheter shaft.

[Claim 95]

The catheter according to any one of claims 90 to 94 containing an operating element combined with said vaginate part for said catheter to move said vaginate part to said catheter shaft.

[Claim 96]

The catheter according to any one of claims 90 to 95, wherein a guidewire opening is provided in said catheter in a position which only a fixed distance separated from a proximal edge of said catheter to the distance side for quick exchange on a guidewire of said catheter.

[Claim 97]

A catheter indicated substantially [ Drawings / a Description and / attached ].

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[Translation done.]